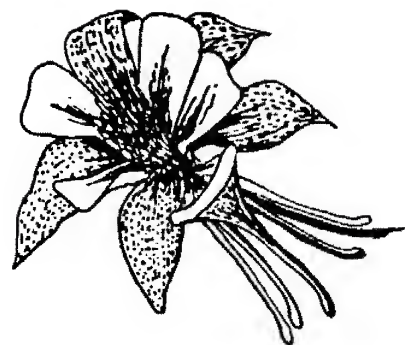


# Aquilegia



Newsletter of the Colorado Native Plant Society

"DEDICATED TO THE APPRECIATION AND CONSERVATION OF THE COLORADO FLORA"

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Volume 11, Number 1

January 1987

## BOARD NEWS

The CONPS Board of Directors met on November 15 at the home of Dr. Miriam Denham in Boulder. President Eleanor Von Bargaen reported on the Tenth Anniversary Annual Meeting which was held in Fort Collins in October. A letter from Dr. Dieter Wilkin was read in which he expressed his gratitude for the honorary life membership presented to him at the annual meeting.

Announcement was made of the resignation of Dr. Douglass Ripley from the Board and a selection of a possible successor was discussed.

A motion was passed to continue the policy of allocating 25% of the dues of those members desiring Chapter affiliation to the respective Chapters. There was a discussion of Chapter organization and participation in addition to reports from committees.

Sue Martin, Conservation Chair, reported that the Bureau of Land Management (BLM) has favorably amended its proposed management plan for the Piceance Basin. CONPS can take some credit for this since the Conservation Committee, as well as numerous individual members, sent in comments to the BLM on this plan. Congratulations on a job well done!

The new name of the newsletter was also decided. (See other short article.)

## CONGRATULATIONS!

Gwen and Tim Kittel of Bellvue are the winners of the "Name the Newsletter" Contest. Though many of you suggested the name "Aquilegia", the Kittels were the first to send in their suggestion. For your winning suggestion, the Society would like to award you a free year's membership.

Thanks to you and all the others for sending in your ideas. There were some great suggestions and it was difficult to choose the new name, but the Board felt "Aquilegia", the state flower, should be so honored.

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## CALENDAR

- |         |  |
|---------|--|
| Jan. 17 | Parasitic and Saprophytic Plants<br>Workshop: Dr. Frank Hawksworth |
| Feb. 7  | Ecology of Wetlands<br>Workshop: Mr. Steve Dougherty               |
| Feb. 28 | Selected Woody Genera in Rosaceae<br>Workshop: Ms Gayle Weinstein  |
| Mar. 21 | Propagation of Colorado Native Plants<br>Workshop: Jim Borland     |

Thanks to the CONPSI

We would like to extend special thanks to you all for providing a grant to cover the transportation costs for our monitoring work on Braya humilis. With your generous donation, we visited each of our three study sites at least twice last summer.

Braya is an alpine "belly plant", a very small white-flowered member of the mustard family that grows on calcareous soils derived from limestone and dolomite. It is a rare taxon in Colorado, occurring in small isolated populations on highly mineralized soils with potential for hardrock mining. Populations are known from 12 general locations, one recently discovered on Taylor Pass. Braya grows in areas of natural soil movement, such as solifluction lobes, fine scree slopes, and abandoned mine roads.

After searching for new populations in 1985, we began a long-term population study of the three largest populations which span a gradient of disturbance. We established permanent plots at each site, tagged each Braya plant in the plots, and made a series of size measurements on the plants. We continued the study last June and August 1986.

We are investigating the population biology of Braya in relation to disturbance. We hope to learn about Braya's life history so that we can make rational management recommendations regarding its conservation. Thanks again for your support!

Betsy Neely  
Alan Carpenter

TROPICAL RAINFORESTS:  
STRATEGIES FOR WISE MANAGEMENT  
A Four Day Conference

The University of Colorado will host a conference on tropical rainforests February 5 - 8, 1987. The four-day conference will bring together many of the world's leading rainforest experts to discuss ways of better managing this irreplaceable resource.

Topics to be covered include: biological diversity, indigenous peoples, international consumerism, climatic effects, international lending policies, and the impact of economic activities such as cattle ranching, colonization, and dam building.

The goal of the conference will be to educate participants on the problems of rainforest management and to provide a context for policy solutions and outlets for activism.

Registration fees are: individuals: \$15/day; \$30/four days. representatives of groups: \$30/day; \$60/four days.

For more information, contact the CU Environmental Center, UMC 331A, Campus Box 207, University of Colorado, Boulder, Colorado 80309, 303-492-8308.

(See last newsletter for more detailed information on this conference.)





## CONPS Workshops

Sat., Jan. 17, 1987

### Parasitic and Saprophytic Plants

Leader: Dr. Frank Hawksworth

Parasites like mistletoes and broomrapes derive their nourishment from other living plants. Saprophytes like pinedrops live off decaying plant material in symbiosis with fungi. Dr. Hawksworth, who has published extensively on the mistletoes, will cover these plants plus broomrapes, dodders, and the saprophytic genera in the Orchidaceae and Ericaceae. To be held at the US Forest Service, Fort Collins. Registration fee: \$8 (members); \$16 (non-members).



Sat., Feb. 7, 1987

### Ecology of Wetlands

Leader: Mr. Steve Dougherty

Wetlands are extremely important for many reasons, not just botanically or zoologically. Steve will explain just what is really meant by the broad term wetland, why they are so vital, and what plant associations are present. To be held at the Denver Botanic Gardens. Registration fee: \$8 (members); \$16 (non-members).

Sat., Feb. 28, 1987

### Selected Woody Genera in Rosaceae

Leader: Gayle Weinstein

This workshop will focus on the winter identification of woody plants in the Rose family. Examples include: Cowania, Fallugia, Chamaebataria, Purshia, Cercocarpus, Prunus, Paraphyllum, and Ame-lanchier. These genera are important components of western plant communities. Registration fee: \$8 (members); \$16 (non-members).

Sat., March 21, 1987

### Propagation of Colorado Native Plants

Leader: Jim Borland

Starting native plants from seeds and cuttings is not a secret known only to a select few nursery people and green thumbs. Special techniques and procedures for starting native seed will include descriptions and demonstrations of stratification, scarification and after-ripening processes to overcome dormancy problems. Many of our alpine-to-desert species can also be easily propagated by the same cutting techniques used for African violets and philodendrons. This workshop will be held at the Denver Botanic Gardens. Bring: knife, pruners or scissors, fingernail file, large zip-lock bags and a large dose of inquisitiveness. Registration fee: \$8 (members); \$16 (non-members).

To register, contact CONPS workshop coordinator, Bill Jennings, 360 Martin Drive, Boulder, 80303, 494-5159. Please register promptly as workshops tend to fill up fast. You may pay in advance or at the workshop as you wish. Registrants will be notified by mail about two (2) weeks prior to the workshop regarding final location, time, lunch, suggested references, etc. Be sure to include your mailing address and phone number if you mail in your registration. Cancellations sometimes create openings, so check with Bill a few days before the workshop if you want to try to register at the last minute.

Workshops scheduled for March, April and May 1987 will be announced in later newsletters.

Please let us know how you like the workshops and field trips we plan. We need your suggestions for others as well as your feedback on whether you enjoyed them, found them informative and exciting or dull and nothing new. Send us feedback!

## CONPS TEN YEAR HISTORY

(On the 10th Anniversary of the Colorado Native Plant Society's foundation, it is important to recall the early events that led to its formation. The following represents a summary of those events and some of the persons involved, based on the recollections of involved persons and some of the early correspondence concerning events prior to the First Annual Meeting in October, 1976.)

The Endangered Species Act of 1973 made possible the legal protection of rare animals and plants. Implementation of the legislation required considerable information on the biological status and location of such species. Federal and state agencies and private conservation organizations soon learned, however, that such information either was not readily available or did not exist. In order to begin the process of recognizing rare plant species in Colorado, a number of persons conceived the idea of a Threatened and Endangered Species Workshop in late 1975. They included Jerry Martinez and Bob Buttery of the U.S. Fish and Wildlife Service (FWS) and Lois Webster and Bob Turner of the Audubon Society.

Primarily through the efforts of these four persons, the workshop was organized and held in March, 1976, at the Denver Botanic Gardens. Most participants included members of the Audubon Society, botanists from several public and private universities and colleges, and biologists working for the Bureau of Land Management (BLM), FWS, and the Soil Conservation Service (SCS).

The workshop was held primarily to organize efforts regarding protection of rare plants of Colorado and to identify sources of biological information. One of the ideas discussed at the workshop was

the organization of a Colorado Native Plant Society, which could mobilize public awareness of native plants and aid in the protection of rare species.

The organizing committee for this effort included Jon Halverson, Steve Bissel, Bill Harmon, Donna Nye, Kim Vories, Karen Holweg, Jean Widman, Chuck Feddema, Peter Mogielnicki, John Marr, Genny Bryant, Scott Peterson, Lois Webster, and Dieter Wilken. The organizing committee was chaired by John Marr and met several times during the spring and early summer of 1976. The Articles of Incorporation were drafted and written by Jon Halverson, who volunteered his expertise as an attorney and, during the summer of 1976, the Society was incorporated as a non-profit organization. Because legal incorporation required a Board of Directors, the organizing committee elected John Marr as our first President on September 9, 1976. However, John agreed to serve as President only until the first meeting of the Society, which took place less than one month later. Genny Bryant served as Vice-President while Kim Vories served as a Treasurer (incidentally, without a treasury!). Donna Nye served as Secretary and, with the aid of several other committee members, accomplished the most important tasks of publicity for the first official meeting of the Society.

The first annual meeting of the Society was convened at 7:30 pm on October 9, 1976 at the Denver Botanic Gardens. Approximately 170 persons attended the meeting and, by the end of the day, approximately 150 had become members of the new Society. Bob Turner served as Master of Ceremonies. Steve Bissel (Colorado Division of Wildlife) gave a brief summary concerning the development and activities of the organizing committee



and the formation of the Society during the previous months. Chuck Feddema (FWS Herbarium) spoke on he expressed goals of the Society, using the theme "the appreciation and conservation of the Colorado native flora", which now appears on the newsletter. On behalf of the Society, Kim Vories presented Honorary Life Memberships to two distinguished Colorado botanists, Dr. Harold Harrington and Dr. William Weber. Dr. Weber, featured speaker of the meeting, gave an illustrated lecture entitled "Colorado's Circumglobal Flora", a presentation that demonstrated both the unique nature and diversity of plants in the state of Colorado.

Events following the first annual meeting of the Society are now recorded in the newsletter. These records give only a small indication of the extensive effort that has been expended by many members of the Society and its committees. In the past ten years, the Society has sponsored field-

trips throughout the entire state, primarily to acquaint participants with the diverse flora of the region. Some of the most important accomplishments include the Society's efforts in drawing attention to some of the unique natural areas of the Piceance Basin and supporting the Nature Conservancy's recommendations regarding protection of habitats and species in the oil shale lands. The Society has undertaken a number of notable projects, including the Florissant Fossil Beds plant inventory, participation in programs on revegetation and landscaping with native species, and a number of workshops designed to acquaint the membership with identification and recognition of certain plant groups. The growth in membership over ten years, the establishment of active local chapters and the growing awareness for the aesthetic and biological importance of Colorado's plant diversity assures that the Society will continue to thrive.

Dieter Wilkin

#### CONPS Chapters

\*Fort Collins

\*Boulder

\*Denver

**RARE AND ENDANGERED PLANTS:  
A California Conference on Their  
Conservation and Management**

I recently attended California's first statewide conference on the conservation and management of rare and endangered plants, sponsored by the California Native Plant Society in Sacramento from November 5 - 8. CNPS organized a truly innovative conference, presenting both problems and solutions for a wide range of topics involving rare plant protection. The program was designed for a broad spectrum of people including academics, planners, managers, and amateurs. Imagine between 800 and 1000 botanists in the same hotel!

General sessions highlighted California's endangered natural heritage and agency viewpoints on plant protection. Academic celebrities such as Paul Erhlich (Stanford), Daniel Axelrod (UC-Davis), Arthur Kruckeberg (UW), and G. L. Stebbins (UC-Davis) were keynote speakers.

Concurrent sessions included such topics as legal aspects of endangered plant protection, impacts of exotic species, California's endangered habitats, case studies of endangered plants, survey and assessment techniques, population dynamics, mitigation, monitoring, land use and long range planning, species management, systematics, agency conservation strategies, species recovery, and propagation and revegetation. As if that weren't enough, on Saturday, topics covered endangered species education, population size and long-term survival, preserve de-

sign, and CNPS involvement in plant conservation issues.

And for the die-hards, evening programs featured multi-media presentations, poster sessions, and open forum discussions. Stebbins, keynote speaker at the banquet, discussed his involvement as one of the founding fathers of the CNPS, and shared stories about the joys of finding rare and new species in the wild.

California has an impressive rare plant program, providing a model that states like Colorado should study more closely. For instance, the state has: 1) an Endangered Species Act (a recent update of the 1977 Native Plant Protection Act); 2) an endangered species tax check-off; and 3) an Environmental License Plate Fund, which provides monies for endangered species habitat acquisition. Additionally, the CNPS has a full-time botanist and has recently established a rare plant research grant. Of course, California may be progressive in its programs because it has already reached the "emergency level" in which vast acreages are being lost to development, endangering the highly-endemic flora.

The conference was a big success, leaving me with an overwhelming feeling of fascination for rare plants, and an urgent need to protect Colorado's native flora.

Betsy Neely

(Editor's note: Betsy Neely was one of the speakers at the Annual Meeting in October.)

## WHEN IS A PLANT NATIVE?

(reprinted by permission from The Green Thumb 43(1):29-32, journal of the Denver Botanic Gardens.)

Recently a British botanist, D. W. Webb, published a thought-provoking essay called "What are the criteria for presuming native status?" (Watsonia 15:231-236. 1985). In it he shows how difficult it often is for botanists to know what is "native" to the tight little island of England and what was brought in (and this might date back to the Vikings and the Romans!). In Colorado we don't have quite as much trouble, because we don't have that long history of colonization and conquest, but we do have our aliens, and sometimes it is hard to know whether they really were brought to us in historic times or not, deliberately or accidentally.

Best to begin with a few definitions. I prefer "indigenous" to "native" (Webb says that some authors interpret "native" as synonymous with "long-established") as meaning "original to the area, not introduced." Among indigenous plants, some are "endemic" -- confined to a given region; this word can be modified to "broadly" or "narrowly" depending on the size of the area occupied. Some are "disjunct" -- having one area of habitation widely separated from another. "Cosmopolitan" means world-wide, but few species really are this way; people find it just too tedious to list all of the places they occur.

Some terms for non-indigenous plants are: "adventive" -- coming from elsewhere, usually accidentally; "introduced" -- deliberately brought in; "escaped from cultivation"; "weed" -- often used in the same context but even native plants can behave as weeds, Helianthus annuus (common sunflower) and Cleome serrulata (Rocky Mountain bee plant), for example. The word "weed" has an enormous number of different connotations; they don't

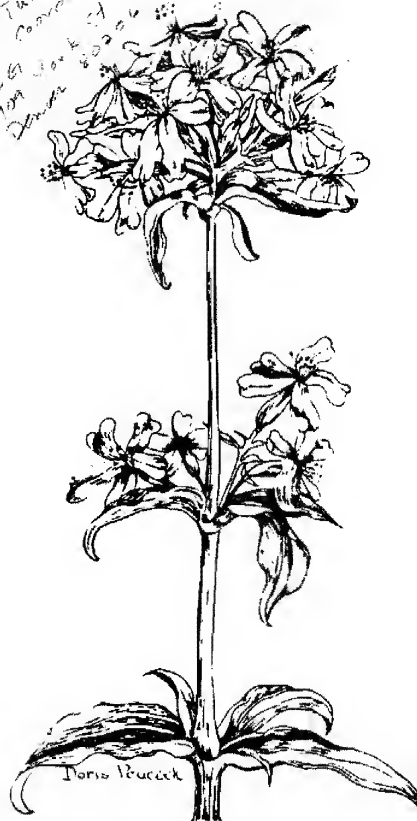
concern us here. People probably get the notion from using floras that the botanist has some miraculous way of knowing whether a particular plant is indigenous or not. Unfortunately, they do not; and too often they dutifully copy what someone else has said without applying their minds to the local situation. The purpose of these pages is to extend Mr. Webb's interesting question to the Colorado scene, and to bring up some other random but interesting points about indigenous flora.

William Weber

Illustrations by Doris Peacock

continued next issue

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*Saponaria officinalis*—Bouncing Bet



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SCHEDULE OF MEMBERSHIP FEES			
Life	\$250.00	Family or Dual	\$12.00
Supporting	50.00	Individual	8.00
Organization	25.00	Student or Senior	4.00

Please direct all other inquiries regarding the Society to the SECRETARY in care of the Society's mailing address.

COMMITTEES	
Conservation	Sue Martin 226-3371
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Florissant	Mary Edwards 233-8133
Horticulture & Rehabilitation	Gayle Weinstein 333-3024
Membership	Myrna Steinkamp 226-3371
Publicity	-----
Workshops	Bill Jennings 494-5159

NEWSLETTER CONTRIBUTIONS  
Please direct all contributions to the newsletter to  
Peter Root  
4915 West 31st Avenue  
Denver, CO 80212

Deadlines for newsletter materials are one month prior to publication dates, which are January 15, March 15, May 15, July 15, September 15, and November 15.

There is a special need for short filler items such as some unusual information about a plant, a little known botanical term, etc. Please include author's name and address, but items will be printed anonymously if requested.

MEMBERSHIP RENEWALS AND INFORMATION  
Please direct all membership applications, renewals and address changes to the MEMBERSHIP chairperson, in care of the Society's mailing address.

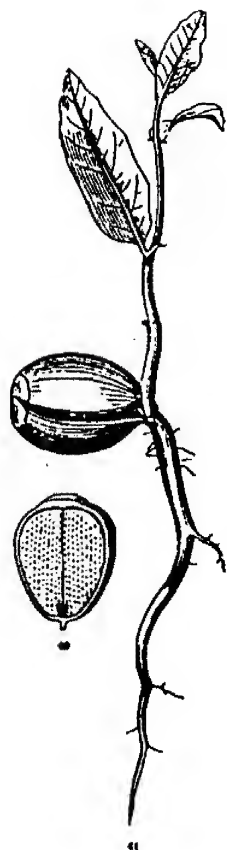
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## FORT COLLINS CHAPTER CALENDAR



- Wednesday, January 21 PARASITIC HIGHER PLANTS OF COLORADO. Dr. Frank Hawksworth of the USDA Forest Service Research Program in Fort Collins will discuss the biology and taxonomy of mistletoes, dodders, and broomrapes.
- Thursday, February 19 THE NATURE CONSERVANCY IN THE WESTERN UNITED STATES. Patrique Bourgeron from the Nature Conservancy Headquarters in Denver will present a program describing TNC's activities and his role as the Regional Ecologist for the western states.
- Wednesday, March 11 ASTRAGALUS IN COLORADO: THE BIOLOGY OF RARE SPECIES OF MILKVETCH. Jeff Karron, a doctoral candidate at the EPO Biology Department at CU, will discuss his research on geologically restricted rare species of milkvetch, both their ecology and genetics.
- Thursday, April 9 THE AMERICAN-SOVIET BOTANICAL EXPEDITION TO SOVIET CENTRAL ASIA. Dr. Dieter Wilken, professor of Botany at CSU, will present a slide program of the expedition of which he was a member.

MARK YOUR CALENDARS NOW!!!!

Time: 7:30 P.M. for all meetings

Place: Room E112 of the Plant Sciences Building of the CSU campus

for further information call Carol Brandt, 484-9251 or  
Betsy Neely, 224-4193

